

## 3.1 AIR QUALITY

Section 3.1 describes the air quality within the air basins that would be affected by each Program Alternative, identifies the applicable air districts' significance thresholds, assesses potential impacts of each Program Alternative, and recommends measures to mitigate significant adverse impacts.

### 3.1.1 Description of Resource

Air quality at a given location is determined by the ambient concentrations of various pollutants in the atmosphere that are known to have adverse health effects. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The significance of a pollutant concentration is determined by comparing the concentration to an appropriate federal and/or State ambient air quality standard. The standards represent the allowable atmospheric concentrations at which the public health and welfare are protected and include a reasonable margin of safety to protect the more sensitive individuals in the population. The USEPA establishes the National Ambient Air Quality Standards (NAAQS), while the California Air Resources Board (ARB) establishes the State standards, termed the California Ambient Air Quality Standards (CAAQS). The NAAQS represent maximum acceptable concentrations that generally may not be exceeded more than once per year, except the annual standards, which may never be exceeded. The CAAQS represent maximum acceptable pollutant concentrations that are not to be equaled or exceeded.

The USEPA designates all areas of the nation as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. Criteria for nonattainment designation vary by pollutant. For example, an area is in nonattainment for ozone ( $\text{O}_3$ ) if its NAAQS has been exceeded more than three discontinuous times in 3 years; an area is generally in nonattainment for any other pollutant if its NAAQS has been exceeded more than once per year. The ARB also designates areas of the State as either being in attainment or nonattainment of the CAAQS. An area is in nonattainment if a CAAQS has been exceeded more than once in 3 years.

The pollutants of primary concern that are considered in this analysis include  $\text{O}_3$ , nitrogen oxides ( $\text{NO}_x$ ), Reactive Organic Compounds (ROCs), particulate matter less than 10 microns in diameter ( $\text{PM}_{10}$ ), and Toxic Air Contaminants (TACs). Although ROCs and  $\text{NO}_x$  have no ambient standards, they are important as precursors of  $\text{O}_3$ .

TACs include air pollutants that can produce serious illnesses or increased mortality, even in low concentrations. TACs are compounds that have no established ambient standards, but are known or suspected to cause short-term (acute) and/or long-term (chronic non-carcinogenic or carcinogenic) adverse health effects. Sources of TACs include industrial facilities, internal combustion engines (stationary and mobile), and small area sources (such as solvent usage). The main type of TAC produced from the Program Alternatives would occur as diesel particulate matter (DPM) from diesel-powered vessels, barge equipment, and on-road trucks.

An additional category of air emissions, called greenhouse gases (GHGs), is defined as any gas that absorbs infrared radiation in the atmosphere. GHGs include, but are not limited to, water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). These gases lead to the trapping and buildup of heat in the atmosphere near the earth's surface (the "Greenhouse Effect"). There is increasing evidence that the Greenhouse Effect is leading to global warming and climate change (USEPA 2000). CO<sub>2</sub> from fossil fuel combustion is the primary source of GHG generated in the United States.

#### ***Region of Influence***

Identifying the Region of Influence (ROI) for air quality requires knowledge of the types of pollutants being emitted, pollutant source parameters (e.g., emission rates and effluent temperature), the proximity of sources to other pollutant sources, and meteorological conditions. The ROI for "inert" pollutants (relatively stable pollutants that preserve the same chemical composition from emission to impact as compared to atmospherically reactive pollutants such as O<sub>3</sub> and its precursors) is generally limited to a few miles downwind from a source. The ROI for O<sub>3</sub> can extend much farther downwind than for inert pollutants. Ozone is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors. In the presence of solar radiation, the maximum effect of NO<sub>x</sub> and VOC emissions on O<sub>3</sub> levels usually occurs several hours after they are emitted and many miles from the source.

Generally, concentrations of photochemical smog, or O<sub>3</sub>, are highest during the summer months and coincide with the season of maximum insolation. Inert pollutant concentrations tend to be greatest during the winter months and are a product of light wind conditions and surface-based temperature inversions that frequently occur during this time of year. These conditions tend to inhibit the dispersion of pollutants. The ROI for TACs is similar to inert pollutants, as their impacts tend to be site-specific and subject to the meteorological conditions present at the time of release. Low wind speeds, stable air masses, and constant wind direction are conditions that can contribute to higher concentrations of TACs in a specific area.

#### ***Sensitive Receptors***

The impact of air emissions to sensitive members of the population is a special concern. Sensitive receptor groups include children, elderly, acutely ill persons, and chronically ill persons. The locations of these groups include residences, schools, playgrounds, day care centers, and hospitals.

#### **3.1.2 Environmental Setting**

Emissions from each Program Alternative could affect air quality in one or more of the following air basins: the Santa Barbara/Ventura County portions of the South Central Coast Air Basin (SCCAB), the South Coast Air Basin (SCAB), and the San Joaquin Valley Air Basin (SJVAB). Air quality within these basins is regulated by the Santa Barbara County Air Pollution Control District (SBCAPCD), Ventura County Air Pollution Control District (VCAPCD), South Coast Air Quality Management District (SCAQMD),

- 1 and San Joaquin Valley Air Pollution Control District (SJVAPCD), respectively. Air  
 2 quality and sensitive receptors within these air basins are summarized in Table 3.1-1.

**Table 3.1-1. Baseline Air Quality and Sensitive Receptors in Air Basins  
 Potentially Affected by the Program Alternatives**

<i>Air Basin</i>	<i>Local Air Agency</i>	<i>Baseline Air Quality</i>	<i>Sensitive Receptors</i>
South Central Coast Air Basin (SCCAB), Santa Barbara County portion	Santa Barbara County Air Pollution Control District (SBCAPCD)	Attains all ambient air quality standards except the State O <sub>3</sub> and PM <sub>10</sub> standards. On June 16, 2003, the USEPA re-classified Santa Barbara County as in attainment of the O <sub>3</sub> NAAQS after being in nonattainment of this standard for 30 years. As a result, the County is known as a maintenance area for the O <sub>3</sub> NAAQS.	No sensitive receptors are located near the shell mound sites offshore Santa Barbara County.
South Coast Air Basin (SCAB)	South Coast Air Quality Management District (SCAQMD)	In regard to the NAAQS, presently in “extreme” nonattainment for O <sub>3</sub> , “serious” nonattainment for carbon monoxide (CO) and PM <sub>10</sub> , and a maintenance area for NO <sub>2</sub> , (redesignated by the USEPA in 1998 as in attainment of this standard). In regard to the CAAQS, presently in “extreme” nonattainment for O <sub>3</sub> , “severe” nonattainment for CO, and nonattainment for PM <sub>10</sub> . The SCAB attains all other ambient air quality standards.	No sensitive receptors are located near proposed vessel routes or landfill areas in the POLB. However, roadways used by trucks to transport shell mound materials from the POLB to an upland disposal site are located in proximity to residential areas.
San Joaquin Valley Air Basin (SJVAB), Kern County portion	San Joaquin Valley Air Pollution Control District (SJVAPCD)	Nonattainment of the NAAQS and CAAQS for O <sub>3</sub> and PM <sub>10</sub> . The USEPA considers this portion of the SJVAB to be “severe” and “serious” nonattainment areas for the O <sub>3</sub> and PM <sub>10</sub> NAAQS, respectively. This portion of the project region attains all other ambient air quality standards.	No sensitive receptors are located near the proposed upland recycling site in Taft, Kern County.

- 3 Depending on which Program Alternative is selected, emissions would occur within the  
 4 following areas: (1) at the shell mound sites offshore Santa Barbara County during  
 5 dredging, leveling, or material placement activities, (2) between the sites and the Port of  
 6 Long Beach (POLB), LA-2 ocean disposal site, and/or Catalina Island (for the artificial

reef Program Alternatives) due to the transport of materials by vessels, and (3) between the POLB and an upland disposal or recycling site (e.g., Envirocycle in Kern County) due to the transport of materials by truck. Since the only proposed activities in Ventura County would occur from vessel transport, transportation activities through Ventura County coastal waters would be regulated by the ARB, rather than the VCAPCD.

#### 3.1.3 Regulatory Setting

##### 3.1.3.1 Santa Barbara County

The SBCAPCD regulates stationary sources of air pollution in the County and develops guidelines to determine the significance of air quality impacts for the CEQA and the NEPA purposes. The SBCAPCD uses the *Final 1998 Santa Barbara County Clean Air Plan (1998 CAP)* to address attainment of the State O<sub>3</sub> standard within the County. The SBCAPCD revised the *2001 Clean Air Plan (2001 CAP)* to address maintenance of the federal 1-hour O<sub>3</sub> standard. Through these planning processes, the SBCAPCD develops the *Santa Barbara County Air Pollution Control District Rules and Regulations* to regulate stationary sources of air pollution in Santa Barbara County (SBCAPCD 2003). The SBCAPCD rules that are most applicable to all Program Alternatives include the following:

**Rule 702, General Conformity.** Rule 702 is applicable to federally permitted actions, which would include USACE-permitted activities at the shell mounds, that occur within the County, including State waters out to 3 nautical miles (nm) offshore. This rule requires any federal agency responsible for an action in a nonattainment or maintenance area to determine that the action conforms to the applicable State Implementation Plan (SIP). This means that federally supported or funded activities will not: (1) cause or contribute to any new air quality standard violation; (2) increase the frequency or severity of any existing standard violation; or (3) delay the timely attainment of any standard, interim emission reduction, or other milestone. The rule allows for exemptions for actions that are assumed to conform to an applicable SIP. Emissions of attainment pollutants are exempt from conformity analyses. Actions would conform to a SIP if their annual direct and indirect emissions remain less than the applicable “de minimis” thresholds. Actions that exceed these thresholds are required to conduct formal conformity determinations. Based on the present nonattainment status of Santa Barbara County, the proposed federal action that occurs within the County would conform to the most recent USEPA-approved SIP if its annual emissions do not exceed 100 tons of VOCs or NO<sub>x</sub>.

**Regulation VIII, New Source Review (NSR).** The proposed dredge engines and any vessels associated with the Program Alternative would require an NSR permit and therefore would have to comply with the SBCAPCD NSR requirements. These requirements could include implementation of Best Available Control Technologies (BACT), dispersion modeling analyses, and/or emission offsets. However, these NSR requirements would not apply to any proposed dredge engine that is registered under the ARB Portable Equipment Registration Program (PERP). Additionally, SBCAPCD Rule 804, Section D.8 states that the SBCAPCD cannot require emission offsets for the demolition or removal of a stationary source. Therefore, a final determination of project requirements with SBCAPCD regulations cannot occur until:

(1) the identification of the proposed dredge engines; and (2) the SBCAPCD determines if Rule 804, Section D.8 applies to the project.

### 3.1.3.2 South Coast Air Basin

The SCAQMD, which regulates emission sources within the SCAB, has developed the 1997 Air Quality Management Plan and the 1999 Revised Ozone Plan to bring the region into attainment of the State and national ambient air quality standards. SCAQMD Rules and Regulations that are most applicable to all Program Alternatives include the following:

**Rule 1901, General Conformity.** This rule is applicable to federally permitted actions that occur within the SCAB, including State waters out to 3 nm offshore. Based on the present attainment status of the SCAB, the proposed federal action that occurs within the SCAB would conform to the most recent USEPA-approved SIP if its annual emissions do not exceed 10 tons of VOCs or NO<sub>x</sub>, 100 tons of CO, or 70 tons of PM<sub>10</sub>.

**Rule 403, Fugitive Dust.** This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area, such that the dust remains visible beyond the emission source property line. If the proposed shell mound material handling and disposal sites generate fugitive dust emissions, these operations would have to implement one or more of the applicable best available control measures, as required in Rule 403.

### 3.1.3.3 Kern County

The SJVAPCD regulates stationary sources of emissions within the SJVAB. The SJVAPCD has developed rules and air quality attainment plans designed to reduce emissions to a level that will bring the region into attainment of the O<sub>3</sub> and PM<sub>10</sub> ambient air quality standards. The SJVAPCD rule most applicable to an onshore disposal option in the SJVAB is the following:

**Rule 8031, Bulk Materials.** This rule limits fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials. The proposed upland storage facility would have to comply with applicable fugitive dust control measures in this rule.

### 3.1.4 Significance Criteria

Criteria to determine the significance of air quality impacts are based on federal, State, and local air pollution standards and regulations. Impacts on air quality would be considered significant if project emissions: (1) exceed thresholds used to determine the significance of proposed emissions for the purpose of the CEQA review within each of the air jurisdictions affected by the Program Alternatives, or (2) increase ambient pollutant levels from below to above a national or State ambient air quality standard. The following summarizes the CEQA thresholds applicable to each affected air jurisdiction.

#### **SBCAPCD**

The removal, disposal, or in-place modification activities associated with each Program Alternative are atypical activities whose emissions have not been considered in the 1998 CAP or 2001 CAP (pers. comm., R. Tan, SBCAPCD 2002). To determine the significance of project emissions for the CEQA purposes, the SBCAPCD recommends that they be compared to the SBCAPCD daily operational thresholds of (1) 240 pounds of ROC and NO<sub>x</sub> and (2) 80 pounds of PM<sub>10</sub>.

#### **SCAQMD**

Due to the short-term nature of the proposed activities, project emissions that would occur within the SCAB project region were compared to the following SCAQMD construction emission thresholds: (1) daily emissions of 75 pounds of ROC, 100 pounds of NO<sub>x</sub>, 150 pounds of SO<sub>x</sub> or PM<sub>10</sub>, or 550 pounds of CO and (2) calendar quarter emissions of 2.5 tons of ROC or NO<sub>x</sub>, 6.75 tons of SO<sub>x</sub> or PM<sub>10</sub>, or 24.75 tons of CO (SCAQMD 1993).

#### **SJVAPCD**

Upland disposal of removed materials would be considered an operational activity since it would occur at a facility with long-term operations. Therefore, an action would produce a significant impact if proposed emissions produce one of the following effects (SJVAPCD 2002):

1. Exceed 10 tons per year of ROC or NO<sub>x</sub>,
2. Does not comply with SJVAPCD Regulation VIII, Fugitive PM<sub>10</sub> Prohibition,
3. Emissions of TACs produce a lifetime probability of contracting cancer at greater than 10 in one million,
4. Emissions of TACs result in a hazard index of greater than one, or
5. Produce more than one confirmed odor complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period.

#### **3.1.5 Impact Analysis and Mitigation**

Air quality impacts associated with each Program Alternative could affect air quality in more than one air basin and corresponding air jurisdiction. Consequently, the air quality analysis separately considers the proposed air emissions that would occur within each of these regions. For purposes of the CEQA/NEPA compliance, the analysis combines air emissions that would occur from each Program Alternative within the onshore and offshore areas of each air jurisdiction, plus barging activities within the 12-nm U.S. Territorial Waters Boundary. To determine their significance, emissions generated by each Program Alternative within each air basin were compared to the CEQA thresholds developed by each air jurisdiction.

Factors needed to derive source emission rates for each Program Alternative were obtained from the following sources: (1) the EMFAC2002 on-road mobile source emissions model (ARB 2002); (2) the *ARB Offroad Emissions Model* (ARB 1999); and (3) special studies on vessel emissions (Acurex Environmental Corporation 1996). To perform a conservative analysis, the method to calculate off-road equipment emissions used emission factors for equipment manufactured in the year 1987, as provided by the *Offroad Emissions Model*. This approach may over-estimate emissions from some equipment, as the current equipment fleet includes a substantial amount of newer, lower-emitting equipment compared to 1987-vintage equipment. Appendix F includes data and assumptions used to calculate emissions from each Program Alternative.

### **3.1.5.1 Program Alternative 1 (PA1): Shell Mounds and Caissons Removal and Disposal**

PA1 involves the use of: (1) a barge-mounted, sealed clamshell bucket dredge to remove shell mound materials; (2) mechanical means and explosives to demolish the caissons at the Hazel site; (3) smoothing of the seafloor across each site with a “gorilla net” trawl to remove remnant materials; and (4) transport of the removed shell mound materials and caissons to LA-2 for offshore disposal, or to the POLB for transfer to an onshore disposal or reuse site. Barges would be moored at each site via a three-point or four-point anchoring system.

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region</i>	<i>Class</i>
<b>PA1</b>	<b>AQ-1</b>	Emissions from shell mound and caisson removal and transport activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	SCCAB	II
		Emissions from transport and disposal activities for each Program Alternative option would exceed the SCAQMD daily and calendar quarter NOx threshold. Also, emissions from transport and disposal activities for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds.	SCAB	II

#### **Impacts: Santa Barbara County**

Shell mound and caisson removal and transport activities in the Santa Barbara County region would generate emissions from quasi-stationary sources (a clamshell bucket dredge and auxiliary extraction equipment, such as cranes and winches) and mobile sources (tugboats and dive/support vessels). The overwhelming majority of proposed sources would be diesel-powered. Emissions would occur at the four shell mound sites, which are at least 1.5 nm offshore Carpinteria, and along the barge routes between the shell mounds sites and the southern boundary of the Santa Barbara County portion of the SCCAB.

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA1 within Santa Barbara County. These data show that PA1 would produce the greatest amount of daily emissions for any Program Alternative within Santa Barbara County. The Program Alternative would produce peak daily NO<sub>x</sub> emissions of 904 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds for a period of about 15 continuous days during simultaneous materials removal and transport activities. As a result, PA1 would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). Air emissions during all other periods of PA1 would remain below the SBCAPCD emission thresholds.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from PA1 to produce substantial impacts at any particular location in the onshore region. As a result, emissions from PA1 would not contribute to an exceedance of an ambient air quality standard. These operational characteristics of proposed emission sources also would minimize the potential for emissions of TACs from PA1 to exceed any public health significance criterion in the onshore region.

#### MITIGATION MEASURES (MM) FOR IMPACT AQ-1 (SANTA BARBARA COUNTY)

**AQ-1a**     *The Applicant shall require all project contractors to use reformulated (emulsified) diesel fuel in project equipment. Chevron shall submit to the CSLC initial purchase orders showing purchase of reformulated diesel fuel prior to commencement of construction and a complete set of purchase orders within 30 days following project completion.*

**AQ-1b**     *The Applicant shall require all project contractors to implement 2 to 4 degree injection timing retard (ITR) on all diesel-powered project equipment.*

**AQ-1c**     *The Applicant shall acquire emission reductions through the SBCAPCD Offsite Mitigation Program to offset project daily NO<sub>x</sub> emissions to less than the SBCAPCD daily threshold of 240 pounds.*

Mitigation measures AQ-1a and AQ-1b are the most feasible measures to reduce NO<sub>x</sub> emissions from proposed sources. Due to the short duration of proposed activities, it is infeasible to require for individual construction contractors to implement more expensive measures that would produce greater NO<sub>x</sub> emission reductions, such as engine retrofits or effluent after-treatment devices. Mitigation measure AQ-1c is a relatively cost-effective method to reduce NO<sub>x</sub> emissions from beyond what would occur with the implementation of MMs AQ-1a and AQ-1b.

#### RESIDUAL IMPACTS

Implementation of MM AQ-1a would reduce NO<sub>x</sub> and PM<sub>10</sub> emissions by 14 and 63 percent, compared to the use of conventional diesel (ARB 2001). Implementation of MM AQ-1b would reduce NO<sub>x</sub> emissions by 15 to 30 percent from uncontrolled levels, due to the use of 2 to 4 degree ITR, respectively. Since ITR reduces fuel economy, the analysis only considered 2 degree ITR as a feasible operational condition. Therefore,



**Table 3.1-2. Daily Emissions within Santa Barbara County from the Shell Mounds Program Alternatives**

Alternative/Activity	Daily Emissions (Pounds)				
	ROG	CO	NOx	SO2	PM10
<b>PA1 - Dredge Mound and Cut Caissons</b>					
Caisson Demolition	19.5	78.3	209.8	4.2	11.3
Shell Mounds/Caisson Removal	44.5	201.2	669.3	20.8	26.8
Shell Mounds/Caisson Transport and Disposal	10.2	31.9	234.6	15.1	5.0
Final Smoothing	12.0	19.7	91.8	6.5	5.8
Post-Completion Survey	1.2	2.0	9.5	0.7	0.6
<b>Total Emissions (PA1)</b>	<b>55</b>	<b>233</b>	<b>904</b>	<b>36</b>	<b>32</b>
<b>Mitigated Total Emissions (PA1)</b>	<b>55</b>	<b>233</b>	<b>642</b>	<b>36</b>	<b>12</b>
<b>PA2 - Level/Spread Mounds and Cut Caissons</b>					
Caisson Demolition	19.5	78.3	209.8	4.2	11.3
Spread Shell Mounds/Remove Caissons	43.9	199.2	654.7	19.8	26.5
Caissons Transport and Disposal	5.1	16.0	117.3	7.5	2.5
Final Smoothing	12.0	19.7	91.8	6.5	5.8
Post-Completion Survey	1.2	2.0	9.5	0.7	0.6
<b>Total Emissions (PA2)</b>	<b>49</b>	<b>215</b>	<b>772</b>	<b>27</b>	<b>29</b>
<b>Mitigated Total Emissions (PA2)</b>	<b>49</b>	<b>215</b>	<b>548</b>	<b>27</b>	<b>11</b>
<b>PA3 - Cap Mounds and Caissons - 4 or 6% Slope</b>					
Material Transport and Placement	22.0	68.8	505.9	32.5	10.9
Post-Completion Survey	1.2	2.0	9.5	0.7	0.6
<b>Total Emissions (PA3)</b>	<b>22</b>	<b>69</b>	<b>506</b>	<b>32</b>	<b>11</b>
<b>Mitigated Total Emissions (PA3)</b>	<b>22</b>	<b>69</b>	<b>359</b>	<b>32</b>	<b>4</b>
<b>PA4 - Build Reefs over Mounds and Caissons</b>					
Rock Transport and Placement	42.0	188.0	636.4	20.5	25.2
Post-Completion Survey	1.2	2.0	9.5	0.7	0.6
<b>Total Emissions (PA4)</b>	<b>42</b>	<b>188</b>	<b>636</b>	<b>21</b>	<b>25</b>
<b>Mitigated Total Emissions (PA4)</b>	<b>42</b>	<b>188</b>	<b>452</b>	<b>21</b>	<b>9</b>
<b>PA5a - Remove Mounds and Build Reef over Caissons</b>					
Shell Mounds Removal	44.5	201.2	669.3	20.8	26.8
Shell Mounds Transport and Disposal	10.2	31.9	234.6	15.1	5.0
Rock Transport and Placement	42.0	188.0	636.4	20.5	25.2
Post-Completion Survey	20.8	34.2	159.6	11.3	10.1
<b>Total Emissions (PA5a)</b>	<b>55</b>	<b>233</b>	<b>904</b>	<b>36</b>	<b>32</b>
<b>Mitigated Total Emissions (PA5a)</b>	<b>55</b>	<b>233</b>	<b>642</b>	<b>36</b>	<b>12</b>
<b>PA5b - Level/Spread Mounds and Build Reef over Caissons</b>					
Shell Mounds Spreading	43.9	199.2	654.7	19.8	26.5
Final Smoothing	12.0	19.7	91.8	6.5	5.8
Rock Transport and Placement	42.0	188.0	636.4	20.5	25.2
Post-Completion Survey	1.2	2.0	9.5	0.7	0.6
<b>Total Emissions (PA5b)</b>	<b>44</b>	<b>199</b>	<b>655</b>	<b>20</b>	<b>27</b>
<b>Mitigated Total Emissions (PA5b)</b>	<b>44</b>	<b>199</b>	<b>465</b>	<b>20</b>	<b>10</b>
<b>SBCAPCD Daily Significance Thresholds</b>	<b>240</b>	<b>NA</b>	<b>240</b>	<b>NA</b>	<b>80</b>

**Table 3.1-3. Total Emissions within Santa Barbara County from the Shell Mounds Program Alternatives**

Alternative/Activity	Total Emissions (Tons)				
	ROG	CO	NOx	SO2	PM10
<b>PA1 - Dredge Mound and Cut Caissons</b>					
Caisson Demolition	0.27	1.10	2.94	0.06	0.16
Shell Mounds/Caisson Removal	0.29	1.33	4.12	0.11	0.18
Shell Mounds/Caisson Transport and Disposal	0.06	0.20	1.47	0.09	0.03
Final Smoothing	0.07	0.12	0.55	0.04	0.03
Post-Completion Survey	0.00	0.00	0.02	0.00	0.00
<b>Total Emissions (PA1)</b>	<b>0.70</b>	<b>2.75</b>	<b>9.10</b>	<b>0.30</b>	<b>0.40</b>
<b>Mitigated Total Emissions (PA1)</b>	<b>0.70</b>	<b>2.75</b>	<b>6.46</b>	<b>0.30</b>	<b>0.15</b>
<b>PA2 - Level/Spread Mounds and Cut Caissons</b>					
Caisson Demolition	0.27	1.10	2.94	0.06	0.16
Spread Shell Mounds/Remove Caissons	0.13	0.60	1.96	0.06	0.08
Caissons Transport and Disposal	0.00	0.01	0.06	0.00	0.00
Final Smoothing	0.07	0.12	0.55	0.04	0.03
Post-Completion Survey	0.00	0.00	0.02	0.00	0.00
<b>Total Emissions (PA2)</b>	<b>0.48</b>	<b>1.82</b>	<b>5.53</b>	<b>0.16</b>	<b>0.27</b>
<b>Mitigated Total Emissions (PA2)</b>	<b>0.48</b>	<b>1.82</b>	<b>3.93</b>	<b>0.16</b>	<b>0.10</b>
<b>PA3 - Cap Mounds and Caissons - 6% Slope</b>					
Material Transport and Placement	0.78	2.44	17.96	1.15	0.39
Post-Completion Survey	0.00	0.02	0.08	0.01	0.00
<b>Total Emissions (PA3 - 6% Slope)</b>	<b>0.78</b>	<b>2.46</b>	<b>18.04</b>	<b>1.16</b>	<b>0.39</b>
<b>Mitigated Total Emissions (PA3 - 6% Slope)</b>	<b>0.78</b>	<b>2.46</b>	<b>12.81</b>	<b>1.16</b>	<b>0.14</b>
<b>PA3 - Cap Mounds and Caissons - 4% Slope</b>					
Material Transport and Placement	1.83	5.71	41.99	2.70	0.90
Post-Completion Survey	0.00	0.02	0.08	0.01	0.00
<b>Total Emissions (PA3 - 4% Slope)</b>	<b>1.83</b>	<b>5.73</b>	<b>42.07</b>	<b>2.70</b>	<b>0.91</b>
<b>Mitigated Total Emissions PA3 - 4% Slope)</b>	<b>1.83</b>	<b>5.73</b>	<b>29.87</b>	<b>2.70</b>	<b>0.34</b>
<b>PA4 - Build Reefs over Mounds and Caissons</b>					
Rock Transport and Placement	0.18	0.81	2.70	0.08	0.11
Post-Completion Survey	0.00	0.00	0.02	0.00	0.00
<b>Total Emissions (PA4)</b>	<b>0.18</b>	<b>0.82</b>	<b>2.72</b>	<b>0.09</b>	<b>0.11</b>
<b>Mitigated Total Emissions (PA4)</b>	<b>0.18</b>	<b>0.82</b>	<b>1.93</b>	<b>0.09</b>	<b>0.04</b>
<b>PA5a - Remove Mounds and Build Reef over Caissons</b>					
Shell Mounds Removal	0.25	1.17	3.70	0.10	0.15
Shell Mounds Transport and Disposal	0.06	0.20	1.47	0.09	0.03
Rock Transport and Placement	0.17	0.75	2.55	0.08	0.10
Post-Completion Survey	0.04	0.07	0.32	0.02	0.02
<b>Total Emissions (PA5a)</b>	<b>0.53</b>	<b>2.19</b>	<b>8.03</b>	<b>0.30</b>	<b>0.31</b>
<b>Mitigated Total Emissions (PA5a)</b>	<b>0.53</b>	<b>2.19</b>	<b>5.70</b>	<b>0.30</b>	<b>0.11</b>
<b>PA5b - Level/Spread Mounds and Build Reef over Caissons</b>					
Shell Mounds Spreading	0.09	0.41	1.35	0.04	0.05
Final Smoothing	0.07	0.12	0.55	0.04	0.03
Rock Transport and Placement	0.17	0.75	2.55	0.08	0.10
Post-Completion Survey	0.00	0.00	0.02	0.00	0.00
<b>Total Emissions (PA5b)</b>	<b>0.33</b>	<b>1.29</b>	<b>4.46</b>	<b>0.16</b>	<b>0.19</b>
<b>Mitigated Total Emissions (PA5b)</b>	<b>0.33</b>	<b>1.29</b>	<b>3.17</b>	<b>0.16</b>	<b>0.07</b>

implementation of both measures would reduce NO<sub>x</sub> and PM<sub>10</sub> emissions by 29 and 63 percent, respectively, from uncontrolled levels. Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA1 equipment would reduce peak daily NO<sub>x</sub> emissions from 904 to 642 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from PA1 to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per day.

Implementation of MM AQ-1c would reduce emissions from those estimated for PA1 to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class III). These emission reductions may not be concurrent with the occurrence of project emissions. However, their beneficial effect would occur over a much longer period than for the duration of project activities.

Some, if not most of the emissions that occur within Santa Barbara County from PA1 could be offset subsequent to SBCAPCD Regulation VIII by measures identified through the SBCAPCD's review of the final equipment usage estimates submitted as part of the project permit application. It is possible that these emission offsets could be substantial enough to reduce peak daily NO<sub>x</sub> emissions from PA1 to below the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. If this were the case, MM AQ-1a, AQ-1b, and AQ-1c would not be required for the CEQA/NEPA compliance.

#### *Impacts: South Coast Air Basin*

Program Alternative 1 activities within the SCAB would generate emissions from diesel-powered (1) tugboats used to transport the shell mound and caisson materials from the SCAB boundary (the Los Angeles/Ventura County line) to the LA-2 disposal site or the POLB (for reuse or transfer to trucks), (2) equipment used to offload the materials at the POLB, and/or (3) trucks used to transport the materials between the POLB and an upland disposal site in the SCAB or recycling site in Kern County.

Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from PA1 within the SCAB (Due to the large number of disposal options associated with each project alternative in the SCAB, these data do not include the amount detail presented in Tables 3.1-2 and 3.1-3 for the Santa Barbara County project region. Appendix F presents detailed emission estimates of each project alternative). These data show that peak daily emissions for the Kern County and SCAB upland disposal options would produce the highest daily emission rates for any Program Alternative in the SCAB. Emissions from Program Alternative 1 would exceed the SCAQMD daily and calendar quarter NO<sub>x</sub> thresholds for all disposal options. Additionally, emissions for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds. These significant emission levels would occur for a period of about 13 continuous days during simultaneous materials transport and disposal activities. As a result, PA1 would result in cumulatively considerable net increases of nonattainment pollutants (ROC, CO, and NO<sub>x</sub>) (Class II). The main sources of emissions associated with the Program Alternative 1 activities would be tugboats that barge shell mounds between the Los Angeles/Ventura County line and either LA-2 or the POLB and trucks

### 3.1 Air Quality

- 1 that transport shell mounds from the POLB to either Kern County or an upland disposal
- 2 site in the SCAB.

**Table 3.1-4. Daily Emissions within the South Coast Air Basin from the Shell Mounds Program Alternatives**

Alternative/Activity	Daily Emissions (Pounds)				
	ROG	CO	NOx	SO2	PM10
<b>PA1 - Dredge Mound and Cut Caissons</b>					
LA-2 Option - Transport/Disposal	49.0	153.2	1,126.3	72.3	24.2
LA-2 Option - Mitigated Peak Daily Emissions (1)	49.0	153.2	799.7	72.3	9.0
POLB Re-Use Option - Transport/Disposal	65.4	204.3	1,501.7	96.4	32.3
POLB Re-Use Option - Mitigated Peak Daily Emissions (1)	65.4	204.3	1,066.2	96.4	12.0
Kern Co. Disposal Option - Transport/Disposal	146.7	1,258.4	3,349.8	110.1	64.7
Kern Co. Disposal Option - Mitigated Peak Daily Emissions (1)	146.7	1,258.4	2,378.3	110.1	24.0
SCAB Upland Disposal Option - Transport/Disposal	118.4	880.5	2,690.1	105.3	53.3
SCAB Upland Disposal Option - Mitigated Peak Daily Emissions (1)	118.4	880.5	1,910.0	105.3	19.8
<b>PA2 - Level/Spread Mounds and Cut Caissons</b>					
Transport/SCAB Upland Disposal	54.9	380.4	1,242.2	51.9	25.1
Mitigated Peak Daily Emissions (PA2) (1)	54.9	380.4	882.0	51.9	9.3
<b>PA3 - Cap Mounds and Caissons - 4 or 6% Slope Option</b>					
Transport/Placement	130.7	408.6	3,003.4	192.8	64.5
Mitigated Peak Daily Emissions	130.7	408.6	2,132.4	192.8	23.9
<b>PA4 - Build Reefs over Mounds and Caissons</b>					
Rock Transport and Placement	21.8	68.2	501.5	32.2	10.8
Mitigated Peak Daily Emissions (PA4)	21.8	68.2	356.0	32.2	4.0
<b>PA5a - Remove Mounds and Build Reef over Caissons</b>					
LA-2 Option - Shell Mounds Transport/Disposal	49.0	153.2	1,126.3	72.3	24.2
LA-2 Option - Rock Transport	21.8	68.2	501.5	32.2	10.8
LA-2 Option - Peak Daily Emissions (1)	49.0	153.2	1,126.3	72.3	24.2
LA-2 Option - Mitigated Peak Daily Emissions	49.0	153.2	799.7	72.3	9.0
POLB Re-Use Option - Shell Mounds Transport/Disposal	65.4	204.3	1,501.7	96.4	32.3
POLB Re-Use Option - Rock Transport	21.8	68.2	501.5	32.2	10.8
POLB Re-Use Option - Peak Daily Emissions (1)	65.4	204.3	1,501.7	96.4	32.3
POLB Re-Use Option - Mitigated Peak Daily Emissions	65.4	204.3	1,066.2	96.4	12.0
Kern Co. Disposal Option - Shell Mounds Transport/Disposal	146.7	1,258.4	3,349.8	110.1	64.7
Kern Co. Disposal Option - Rock Transport	21.8	68.2	501.5	32.2	10.8
Kern Co. Disposal Option - Peak Daily Emissions (1)	146.7	1,258.4	3,349.8	110.1	64.7
Kern Co. Disposal Option - Mitigated Peak Daily Emissions	146.7	1,258.4	2,378.3	110.1	24.0
SCAB Upland Disposal Option - Shell Mounds Transport/Disposal	118.4	880.5	2,690.1	105.3	53.3
SCAB Upland Disposal Option - Rock Transport	21.8	68.2	501.5	32.2	10.8
SCAB Upland Disposal Option - Peak Daily Emissions (1)	118.4	880.5	2,690.1	105.3	53.3
SCAB Upland Disposal Option - Mitigated Peak Daily Emissions	118.4	880.5	1,910.0	105.3	19.8
<b>PA5b - Level/Spread Mounds and Build Reef over Caissons</b>					
Rock Transport and Placement	21.8	68.2	501.5	32.2	10.8
Mitigated Peak Daily Emissions (PA5b)	21.8	68.2	356.0	32.2	4.0
<b>SCAQMD Significance Thresholds</b>	<b>75</b>	<b>550</b>	<b>100</b>	<b>150</b>	<b>150</b>
<i>Note: (1) Peak daily emissions would occur during transport of shell mounds by tugboat and/or haul trucks.</i>					

1

**Table 3.1-5. Total Emissions within the South Coast Air Basin from the Shell Mounds Program Alternatives**

Alternative/Activity	Total Emissions (Tons)				
	ROG	CO	NOx	SO2	PM10
<b>PA1 - Dredge Mound and Cut Caissons</b>					
LA-2 Option - Transport/Disposal	0.31	0.96	7.04	0.45	0.15
LA-2 Option - Mitigated Total Emissions	0.31	0.96	5.00	0.45	0.06
POLB Re-Use Option - Transport/Disposal	0.41	1.28	9.39	0.60	0.20
POLB Re-Use Option - Mitigated Total Emissions	0.41	1.28	6.66	0.60	0.07
Kern Co. Disposal Option - Transport/Disposal	0.92	7.86	20.94	0.69	0.40
Kern Co. Disposal Option - Mitigated Total Emissions	0.92	7.86	14.86	0.69	0.15
SCAB Upland Disposal Option - Transport/Disposal	0.74	5.50	16.81	0.66	0.33
SCAB Upland Disposal Option - Mitigated Total Emissions	0.74	5.50	11.94	0.66	0.12
<b>PA2 - Level/Spread Mounds and Cut Caissons</b>					
Transport/SCAB Upland Disposal	0.03	0.19	0.62	0.03	0.01
Mitigated Total Emissions (PA2)	0.03	0.19	0.51	0.03	0.01
<b>PA3 - Cap Mounds and Caissons - 4 or 6% Slope</b>					
6% Slope Option Transport/Placement	4.64	14.50	106.62	6.85	2.29
6% Slope Option - Mitigated Total Emissions	4.64	14.50	75.70	6.85	0.85
4% Slope Option Transport/Placement	10.85	33.91	249.28	16.00	5.35
4% Slope Option - Mitigated Total Emissions	10.85	33.91	176.99	16.00	1.99
<b>PA4 - Build Reefs over Mounds and Caissons</b>					
Rock Transport and Placement	0.09	0.27	2.01	0.13	0.04
Mitigated Total Emissions (PA4)	0.09	0.27	1.42	0.13	0.02
<b>PA5a - Remove Mounds and Build Reef over Caissons</b>					
LA-2 Option - Shell Mounds Transport/Disposal	0.31	0.96	7.04	0.45	0.15
LA-2 Option - Rock Transport	0.09	0.27	2.01	0.13	0.04
LA-2 Option - Total Emissions	0.39	1.23	9.05	0.58	0.19
LA-2 Option - Mitigated Total Emissions	0.39	1.23	6.42	0.58	0.07
POLB Re-Use Option - Shell Mounds Transport/Disposal	0.41	1.28	9.39	0.60	0.20
POLB Re-Use Option - Rock Transport	0.09	0.27	2.01	0.13	0.04
POLB Re-Use Option - Total Emissions	0.50	1.55	11.39	0.73	0.24
POLB Re-Use Option - Mitigated Total Emissions	0.50	1.55	8.09	0.73	0.09
Kern Co. Disposal Option - Shell Mounds Transport/Disposal	0.92	7.86	20.94	0.69	0.40
Kern Co. Disposal Option - Rock Transport	0.09	0.27	2.01	0.13	0.04
Kern Co. Disposal Option - Total Emissions	1.00	8.14	22.94	0.82	0.45
Kern Co. Disposal Option - Mitigated Total Emissions	1.00	8.14	16.29	0.82	0.17
SCAB Upland Disposal Option - Shell Mounds Transport/Disposal	0.74	5.50	16.81	0.66	0.33
SCAB Upland Disposal Option - Rock Transport	0.09	0.27	2.01	0.13	0.04
SCAB Upland Disposal Option - Total Emissions	0.83	5.78	18.82	0.79	0.38
SCAB Upland Disposal Option - Mitigated Total Emissions	0.83	5.78	13.36	0.79	0.14
<b>PA5b - Level/Spread Mounds and Build Reef over Caissons</b>					
Rock Transport and Placement	0.09	0.27	2.01	0.13	0.04
Mitigated Total Emissions (PA5b)	0.09	0.27	1.42	0.13	0.02
<b>SCAQMD Significance Thresholds (1)</b>	<b>2.50</b>	<b>24.75</b>	<b>2.50</b>	<b>6.75</b>	<b>6.75</b>
Note: (1) Tons per calendar quarter.					

2

Project air emissions would occur from mobile sources, such as tugboats and haul trucks. Tugboats would operate within the SCAB waters and the POLB. Haul trucks also could operate on the freeway system between the shell mounds transfer facility at the POLB and the upland disposal site in Kern County. Since emissions from these sources would be spread over such a large area, they would not be expected to produce substantial impacts at any particular location in the onshore region. As a result, emissions from PA1 would not contribute to an exceedance of an ambient air quality standard. For these same reasons and due to the short duration of proposed activities, emissions from PA1 would produce minimal TAC impacts in a locality.

#### MITIGATION MEASURES FOR IMPACT AQ-1 (SOUTH COAST AIR BASIN)

**MMs AQ-1a and AQ-1b**, plus the MM identified below, would apply to this impact.

**AQ-1d**     *The Applicant shall acquire emission reductions through the SCAQMD Offsite Mitigation Program to offset project ROC, CO, and NO<sub>x</sub> emissions to less than the SCAQMD thresholds.*

It would be feasible to implement MMs AQ-1a, AQ-1b, and AQ-1d on all equipment proposed for PA1.

#### RESIDUAL IMPACTS

Tables 3.1-4 and 3.1-5 show that implementation of MMs AQ-1a and AQ-1b would reduce NO<sub>x</sub> emissions from PA1, but not to below the SCAQMD emission significance thresholds.

Implementation of MM AQ-1d would reduce emissions from those estimated for PA1 to below the SCAQMD emission significance thresholds (Class III). These emission reductions may not be concurrent with the occurrence of project emissions. However, their beneficial effect would occur over a much longer period than for the duration of project activities.

#### *Impacts: Kern County*

PA1 activities within Kern County would generate emissions from the transport of shell mound materials by diesel-powered trucks between the Los Angeles/Kern County line and the recycling site in Taft. Table 3.1-6 summarizes the daily and total emissions estimated to occur from the PA1 within Kern County. These data show that emissions from PA1 would not exceed the SJVAPCD annual ROC or NO<sub>x</sub> emission significance thresholds of 10 tons per year (Class III).

Since truck trips from PA1 would occur over a roadway system of about 55 miles in length, emissions from the Program Alternative would not be large enough in a locality to exceed an ambient air quality standard or public health significance criterion (Class III).

1 Emissions from PA1 would not violate SJVAPCD Regulation VIII and would not produce  
 2 odors that would result in complaints from the public. As part of its operational permits,  
 3 the proposed upland disposal site in Kern County, Envirocycle, has to comply with  
 4 SJVAPCD Rule 8031 (Regulation VIII), which limits fugitive dust emissions from the  
 5 outdoor handling, storage, and transport of bulk materials. The proposed upland  
 6 storage facility implements control measures to ensure that PM<sub>10</sub> emissions from the  
 7 facility are less than significant. Since the upland facility is not in proximity to sensitive  
 8 receptors, it is not expected that the handling and storage of these materials would  
 9 produce odorous emissions that would substantially affect the public. Consequently,  
 10 fugitive dust (PM<sub>10</sub>) and odor emissions from the Program Alternative would produce  
 11 less than significant impacts in the SJVAB (Class III).

**Table 3.1-6. Daily/Total Emissions from the Shell Mounds  
Program Alternatives 1 or 5 - Kern County**

Activity/Equipment Type	Daily Emissions (Pounds)				
	ROG	CO	NOx	SO <sub>2</sub>	PM <sub>10</sub>
<b>Transport/Upland Disposal in Kern Co.</b>					
Haul Trucks – To Upland Site	51.7	677.8	1,182.1	8.5	20.1
<b>Total and Peak Daily Emissions</b>	<b>52</b>	<b>678</b>	<b>1,182</b>	<b>9</b>	<b>20</b>
<b>Total Emissions - Tons</b>	<b>0.32</b>	<b>4.24</b>	<b>7.39</b>	<b>0.05</b>	<b>0.13</b>
<b>SJVAPCD Significance Thresholds (1)</b>	<b>10.00</b>	<b>NA</b>	<b>10.00</b>	<b>NA</b>	<b>NA</b>
(1) Tons per year.					

12 MITIGATION MEASURES FOR IMPACT AQ-1 (KERN COUNTY)

13  None proposed.

14 **3.1.5.2 Program Alternative 2 (PA2): Leveling and Spreading of Shell**  
 15 **Mounds with Caissons Removal and Disposal**

Program Alternative	Impact #	Impact Description	Region	Class
<b>PA2</b>	<b>AQ-2</b>	Emissions from shell mound spreading and caisson removal and transport activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	SCCAB	II
		Emissions from caisson material transport and disposal activities would exceed the SCAQMD daily NOx threshold of 100 pounds.	SCAB	II

16 *Impacts: Santa Barbara County*

17 Activities associated with PA2 in Santa Barbara County would involve the same types of  
 18 equipment and emission sources as PA1. However, due to the lower equipment usage  
 19 associated with shell mounds spreading versus removal activities and lower transport

requirements, PA2 would produce lower total emissions, compared to PA1 in Santa Barbara County.

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA2 within Santa Barbara County. These data show that Program Alternative 2 would produce peak daily NO<sub>x</sub> emissions of 772 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. As a result, PA2 would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). These significant emission levels would occur for a period of about 6 continuous days during simultaneous shell mounds spreading and caisson materials transport activities. Air emissions during all other periods of Program Alternative 2 would remain below the SBCAPCD emission thresholds.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 2 to exceed any ambient air quality standard or public health significance criterion in the onshore region (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-2 (SANTA BARBARA COUNTY)

**MMs AQ-1a, AQ-1b, and AQ-1c** would apply to this impact.

#### RESIDUAL IMPACTS

Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA2 equipment would reduce peak daily NO<sub>x</sub> emissions from 772 to 548 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 2 to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per day. However, implementation of MM AQ-1c would reduce emissions from those estimated for PA2 to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class III).

#### *Impacts: South Coast Air Basin*

Activities associated with PA2 in the SCAB would involve the same types of equipment and emission sources as those used for the SCAB upland disposal option under PA1. However, since the Program Alternative would require only 1 barge trip to transport caisson material, PA2 would produce substantially lower total emissions, compared to PA1 in the SCAB.

Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from PA2 within the SCAB. These data show that PA2 would produce the least amount of total emissions for any Program Alternative within the SCAB. Emissions from Program Alternative 2 would exceed the SCAQMD daily NO<sub>x</sub> threshold of 100 pounds. As a result, PA2 would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). These significant emission levels would occur for a period of only 2 days during simultaneous materials transport and disposal activities. The main sources of emissions associated with the Program Alternative 2 activities would be tugboats that barge shell mounds between the Los Angeles/Ventura County line and



POLB and trucks that transport caisson material from the POLB to the upland disposal site in the SCAB.

The mobile nature of proposed emission sources and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 2 to exceed any ambient air quality standard or public health significance criterion in the SCAB (Class III).

MITIGATION MEASURES FOR IMPACT AQ-2 (SOUTH COAST AIR BASIN)

**MMs AQ-1a, AQ-1b, and AQ-1d** would apply to this impact.

RESIDUAL IMPACTS

Table 3.1-4 shows that implementation of MMs AQ-1a and AQ-1b on PA2 equipment would reduce peak daily NO<sub>x</sub> emissions from 1,242 to 882 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 2 to below the SCAQMD daily NO<sub>x</sub> threshold of 100 pounds. However, implementation of MM AQ-1d would reduce emissions from those estimated for PA2 to below the SCAQMD NO<sub>x</sub> emission significance threshold (Class III).

*Impacts: Kern County*

Since PA2 proposes to only dispose of caisson materials in an upland site in the SCAB, the Program Alternative would not produce any air quality impacts in Kern County.

### 3.1.5.3 Program Alternative 3 (PA3): Capping

Program Alternative	Impact #	Impact Description	Region	Class
PA3	AQ-3	Emissions from material transport and placement activities would exceed the SBCAPCD daily NO <sub>x</sub> threshold of 240 pounds.	SCCAB	II
		Emissions from material transport activities would exceed the SCAQMD daily ROC, NO <sub>x</sub> , and SO <sub>2</sub> thresholds. These activities also would exceed the SCAQMD calendar quarter ROC, CO, NO <sub>x</sub> , and SO <sub>2</sub> thresholds.	SCAB	II

The air quality analysis for PA3 assumes that the source of capping material needed for this action would come from a CEQA/NEPA-approved dredging project in the San Pedro Bay Ports (SPBPs) that otherwise would dispose of dredging material at either the LA-2 or LA-3 ocean disposal site off Palos Verdes. To properly perform a CEQA/NEPA analysis and not double-count emissions from two proposed actions, tugboat emissions generated from ocean disposal for this approved action should be netted out of the tugboat emissions estimated for the transport of this material within SCAB waters as part of PA3 (equal to roughly the distance between the SPBPs and

either LA-2 or LA-3). However, to be conservative, the project air quality analysis included these emissions as part of the PA3 action.

#### *Impacts: Santa Barbara County*

The main emission sources associated with PA3 within Santa Barbara County would include tugboats that transport dredged material via bottom-dumping barges between the SPBPs and Carpinteria. A minor amount of emissions would also occur from a survey vessel during the post-completion survey activity.

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA3 within Santa Barbara County. These data show that either the 4 or 6 percent slope option for PA3 would produce the least amount of daily emissions, but the highest total emissions of any Program Alternative in Santa Barbara County. Each Program Alternative would produce peak daily NO<sub>x</sub> emissions of 506 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. As a result, either Program Alternative would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). These daily emission levels would occur for a period of about 71 or 166 days for the 6 or 4 percent slope alternatives, respectively.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 3 to exceed any ambient air quality standard or public health significance criterion in the onshore region (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-3 (SANTA BARBARA COUNTY)

**MMs AQ-1a, AQ-1b, and AQ-1c** would also apply to this impact.

#### RESIDUAL IMPACTS

Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA3 equipment would reduce peak daily NO<sub>x</sub> emissions from 506 to 356 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 3 to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per day. However, implementation of MM AQ-1c would reduce emissions from those estimated for PA3 to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class III).

#### *Impacts: South Coast Air Basin*

The only emission sources associated with PA3 within the SCAB would include tugboats that barge dredged material between the SPBPs and the Los Angeles/Ventura County line. Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from PA3 within the SCAB. These data show that either the 4 or 6 percent slope option for the Program Alternative would produce the least amount of daily emissions, but the highest total emissions of any Program Alternative in the SCAB. Peak daily emissions from each Program Alternative would exceed the SCAQMD daily ROC, NO<sub>x</sub>, and SO<sub>2</sub> thresholds. These daily emission levels would occur for a period of about 71 or 166 days for the 6 or 4 percent slope Program Alternatives. Emissions from

each Program Alternative also would exceed the SCAQMD calendar quarter thresholds for ROC, CO, NO<sub>x</sub>, and SO<sub>2</sub>. As a result, either Program Alternative would result in cumulatively considerable net increases of nonattainment pollutants (ROC, CO, NO<sub>x</sub>, and SO<sub>2</sub> [as a precursor to PM<sub>10</sub>]) (Class II). Ultimately, about 15 percent of these emissions would be the responsibility of the SPBP dredging project sponsor, which is the percentage of total emissions that would occur from the transport of dredged material between the SPBPs and either LA-2 or LA-3, compared to the total emissions generated from material transport between the SPBPs and the Los Angeles/Ventura County lines.

The mobile nature of proposed emission sources and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 3 to exceed any ambient air quality standard or public health significance criterion in the SCAB (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-3 (SOUTH COAST AIR BASIN)

**MMs AQ-1a, AQ-1b, and AQ-1d** would also apply to this impact.

#### RESIDUAL IMPACTS

Tables 3.1-4 and 3.1-5 show that implementation of MMs AQ-1a and AQ-1b would reduce NO<sub>x</sub> emissions from Program Alternative 3, but not to below the SCAQMD emission significance thresholds (Class I). However, implementation of MM AQ-1d would reduce emissions from those estimated for PA3 to below the SCAQMD emission significance thresholds (Class III).

#### *Impacts: Kern County*

Since PA3 proposes only materials transport and placement activities between the SCAB and Santa Barbara County, the Program Alternative would not produce any air quality impacts in Kern County.

#### **3.1.5.4 Program Alternative 4 (PA4): Artificial Reefs at all Four Shell Mounds**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region</i>	<i>Class</i>
<b>PA4</b>	<b>AQ-4</b>	Emissions from rock transport and placement activities would exceed the SBCAPCD daily NO <sub>x</sub> threshold of 240 pounds.	SCCAB	II
		Emissions from rock transport activities would exceed the SCAQMD daily NO <sub>x</sub> threshold of 100 pounds.	SCAB	II

#### *Impacts: Santa Barbara County*

The air quality analysis for PA4 assumes that tugboats would transport rock by barge from a quarry on Santa Catalina Island to the shell mounds sites. The Program

Alternative within Santa Barbara County would involve the same types of equipment and emission sources as the shell mounds removal activity.

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA4 within Santa Barbara County. These data show that PA4 would produce the least amount of total emissions of any Program Alternative in Santa Barbara County. The Program Alternative would produce peak daily NO<sub>x</sub> emissions of 636 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. As a result, PA4 would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). These significant emission levels would occur for a period of about 8 continuous days during simultaneous rock transport and placement activities. Air emissions during all other periods of Program Alternative 4 would remain below the SBCAPCD emission thresholds.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 4 to exceed any ambient air quality standard or public health significance criterion in the onshore region (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-4 (SANTA BARBARA COUNTY)

**MMs AQ-1a, AQ-1b, and AQ-1c** would also apply to this impact.

#### RESIDUAL IMPACTS

Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA4 equipment would reduce peak daily NO<sub>x</sub> emissions from 636 to 452 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 4 to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per day. However, implementation of MM AQ-1c would reduce emissions from those estimated for PA4 to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class III).

#### *Impacts: South Coast Air Basin*

Emission sources associated with the PA4 within the SCAB would include tugboats that barge rock between Catalina Island and the Los Angeles/Ventura County line. Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from PA4 within the SCAB. These data show that the Program Alternative would produce the least amount of daily emissions of any Program Alternative within the SCAB. Emissions from the Program Alternative would exceed the SCAQMD daily NO<sub>x</sub> threshold. As a result, PA4 would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). These exceedances would occur for a total of about 8 days.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 4 to exceed any ambient air quality standard or public health significance criterion within the SCAB (Class III).

MITIGATION MEASURES FOR IMPACT AQ-4 (SOUTH COAST AIR BASIN)

MMs AQ-1a, AQ-1b, and AQ-1d would also apply to this impact.

RESIDUAL IMPACTS

Table 3.1-4 shows that implementation of MMs AQ-1a and AQ-1b on PA4 equipment would reduce peak daily NO<sub>x</sub> emissions from 502 to 356 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 4 to below the SCAQMD daily NO<sub>x</sub> threshold of 100 pounds per day. However, implementation of MM AQ-1d would reduce emissions from those estimated for PA4 to below the SCAQMD NO<sub>x</sub> emission significance threshold (Class III).

*Impacts: Kern County*

PA4 only proposes rock transport and placement activities between the SCAB and Santa Barbara County, and would not produce any air quality impacts in Kern County.

**3.1.5.5 Program Alternative 5 (PA5): Artificial Reef at Hazel after Removing (5a) or Spreading (5b) Shell Mounds**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region</i>	<i>Class</i>
<b>PA5a</b>	<b>AQ-5a</b>	Emissions from shell mound removal/transport and rock transport/placement activities would exceed the SBCAPCD daily NO <sub>x</sub> threshold of 240 pounds.	SCCAB	II
		Emissions from transport and disposal activities for each Program Alternative option would exceed the SCAQMD daily and calendar quarter NO <sub>x</sub> threshold. Also, emissions from transport and disposal activities for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds.	SCAB	II
<b>PA5b</b>	<b>AQ-5b</b>	Emissions from shell mound spreading and rock transport/placement activities would exceed the SBCAPCD daily NO <sub>x</sub> threshold of 240 pounds.	SCCAB	II
		Emissions from rock transport activities would exceed the SCAQMD daily NO <sub>x</sub> threshold of 100 pounds.	SCAB	II

Program Alternative 5 includes two options to build an artificial reef at the Hazel site. The shell mounds removal and disposal activities under option PA5a would require the same types of equipment, but slightly less equipment usages as what are identified for these activities under PA1. The shell mounds spreading activity under option PA5b

would require the same types of equipment usages as what is identified for this activity under PA2. The rock transport and placement activities under options PA5a and PA5b would require the same types of equipment usages as what are identified for these activities under PA4.

#### *Program Alternative 5a: Build Artificial Reef at Hazel Site After Removal and Disposal of Shell Mounds*

##### *Impacts: Santa Barbara County*

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA5a within Santa Barbara County. These data show that PA5a would produce the greatest amount of daily emissions for any Program Alternative within Santa Barbara County. The Program Alternative would produce peak daily NO<sub>x</sub> emissions of 904 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. As a result, PA5a would result in a cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II). Emission from the Program Alternative would exceed this threshold for a period of about 21 continuous days during materials removal, placement, and transport activities. Air emissions during all other periods of Program Alternative 5a would remain below the SBCAPCD emission thresholds.

The mobile nature of proposed emission sources, the distance that these sources would operate from shore, and the short duration of proposed activities would minimize the potential for emissions from Program Alternative 5a to exceed any ambient air quality standard or public health significance criterion in the onshore region (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-5A (SANTA BARBARA COUNTY)

**MMs AQ-1a, AQ-1b, and AQ-1c** would also apply to this impact.

#### RESIDUAL IMPACTS

Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA5a equipment would reduce peak daily NO<sub>x</sub> emissions from 904 to 642 pounds. As a result, implementation of these measures would not reduce NO<sub>x</sub> emissions from Program Alternative 5a to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per day. However, implementation of MM AQ-1c would reduce emissions from those estimated for PA5a to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class III).

##### *Impacts: South Coast Air Basin*

Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from PA5a within the SCAB. These data show that peak daily emissions for the Kern County and SCAB upland disposal options would produce the highest daily emission rates for any Program Alternative in the SCAB. Emissions from Program Alternative 5a would exceed the SCAQMD daily and calendar quarter NO<sub>x</sub> thresholds for all disposal options. Additionally, emissions for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds. As a result, PA5a would result in

cumulatively considerable net increases of nonattainment pollutants (ROC, CO, and NO<sub>x</sub>) (Class II). These significant emission levels would occur for a period of about 21 continuous days during materials transport and disposal activities.

Project air emissions would occur from mobile sources, such as tugboats and haul trucks. Tugboats would operate within the SCAB waters and the POLB. Haul trucks also could operate on the freeway system between the shell mounds barge berth and the upland disposal site in Kern County. Since emissions from these sources would be spread over such a large area, they would not be expected to produce impacts that would contribute to an exceedance of an ambient air quality standard or public health significance criterion within the SCAB (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-5A (SOUTH COAST AIR BASIN)

**MMs AQ-1a, AQ-1b, and AQ-1d** would apply to this impact.

#### RESIDUAL IMPACTS

Tables 3.1-4 and 3.1-5 show that implementation of MMs AQ-1a and AQ-1b would reduce NO<sub>x</sub> emissions from Program Alternative 5a, but not to below the SCAQMD emission significance thresholds. However, implementation of MM AQ-1d would reduce emissions from those estimated for PA5a to below the SCAQMD NO<sub>x</sub> emission significance threshold (Class III).

#### *Impacts: Kern County*

Table 3.1-6 summarizes the daily and total emissions estimated to occur from the PA5a within Kern County. These data show that emissions from Program Alternative 5a would not exceed the SJVAPCD annual ROC or NO<sub>x</sub> emission significance thresholds of 10 tons per year (Class III).

Similar to PA1, emissions from PA5a would not be large enough in a locality to exceed an ambient air quality standard or public health significance criterion (Class III). Additionally, fugitive dust (PM<sub>10</sub>) and odor emissions from the Program Alternative would produce less than significant impacts in the SJVAB (Class III).

#### MITIGATION MEASURES FOR IMPACT AQ-5A (KERN COUNTY)

None proposed.

#### *Program Alternative 5b: Build Artificial Reef at Hazel Site and Level/Spread Shell Mounds*

#### *Impacts: Santa Barbara County*

Tables 3.1-2 and 3.1-3 summarize the daily and total emissions estimated to occur from PA5b within Santa Barbara County. These data show that the Program Alternative would produce peak daily NO<sub>x</sub> emissions of 655 pounds, which would exceed the SBCAPCD daily NO<sub>x</sub> threshold of 240 pounds. As a result, PA5b would result in a

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1 cumulatively considerable net increase of a nonattainment pollutant (NO<sub>x</sub>) (Class II).  
2 Emission from the Program Alternative would exceed this threshold for a period of about  
3 12 days during shell mounds spreading and rock transport/placement activities. Air  
4 emissions during all other periods of Program Alternative 5b would remain below the  
5 SBCAPCD emission thresholds.

6 The mobile nature of proposed emission sources, the distance that these sources would  
7 operate from shore, and the short duration of proposed activities would minimize the  
8 potential for emissions from Program Alternative 5b to exceed any ambient air quality  
9 standard or public health significance criterion in the onshore region (Class III).

#### 10 MITIGATION MEASURES FOR IMPACT AQ-5B (SANTA BARBARA COUNTY)

11 **MMs AQ-1a, AQ-1b, and AQ-1c** would also apply to this impact.

#### 12 RESIDUAL IMPACTS

13 Table 3.1-2 shows that implementation of MMs AQ-1a and AQ-1b on PA5b equipment  
14 would reduce peak daily NO<sub>x</sub> emissions from 655 to 465 pounds. As a result,  
15 implementation of these measures would not reduce NO<sub>x</sub> emissions from Program  
16 Alternative 5b to below the SBCAPCD NO<sub>x</sub> significance threshold of 240 pounds per  
17 day. However, implementation of MM AQ-1c would reduce emissions from those  
18 estimated for PA5b to below the SBCAPCD NO<sub>x</sub> emission significance threshold (Class  
19 III).

#### 20 *Impacts: South Coast Air Basin*

21 Tables 3.1-4 and 3.1-5 summarize the daily and total emissions estimated to occur from  
22 PA5b within the SCAB. These data show that the Program Alternative would produce  
23 the least amount of daily emissions of any Program Alternative within the SCAB.  
24 Emissions from the Program Alternative would exceed the SCAQMD daily NO<sub>x</sub>  
25 threshold. As a result, PA5b would result a in cumulatively considerable net increase of  
26 a nonattainment pollutant (NO<sub>x</sub>) (Class II). These exceedances would occur for a total  
27 of about 8 days.

28 The mobile nature of proposed emission sources, the distance that these sources would  
29 operate from shore, and the short duration of proposed activities would minimize the  
30 potential for emissions from Program Alternative 5b to exceed any ambient air quality  
31 standard or public health significance criterion within the SCAB (Class III).

#### 32 MITIGATION MEASURES FOR IMPACT AQ-5B (SOUTH COAST AIR BASIN)

33 **MMs AQ-1a, AQ-1b, and AQ-1d** would also apply to this impact.

#### 34 RESIDUAL IMPACTS

35 Table 3.1-4 shows that implementation of MMs AQ-1a and AQ-1b on PA5b equipment  
36 would reduce peak daily NO<sub>x</sub> emissions from 502 to 356 pounds. As a result,  
37 implementation of these measures would not reduce NO<sub>x</sub> emissions from Program



Alternative 5b to below the SCAQMD daily NO<sub>x</sub> threshold of 100 pounds per day. However, implementation of MM AQ-1d would reduce emissions from those estimated for PA5b to below the SCAQMD NO<sub>x</sub> emission significance threshold (Class III).

*Impacts: Kern County*

Since PA5b does not propose any upland disposal activities, the Program Alternative would not produce any air quality impacts in Kern County.

**3.1.5.6 Program Alternative 6 (PA6): Offsite Mitigation**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region</i>	<i>Class</i>
<b>PA6</b>	<b>AQ-6</b>	Significant air quality impacts associated with offsite mitigation actions could occur from (1) combustive emissions due to the use of fossil fuel-fired equipment used in activities such as dredging, earth-moving, or clearing of vegetation or (2) fugitive dust due to the use of equipment on dry soils.	SCCAB	II

*Impacts: Santa Barbara County*

Air quality impacts associated with offsite mitigation actions at the Carpinteria Marsh could occur from combustive emissions due to the use of fossil fuel-fired equipment used in activities such as dredging, earth-moving, or clearing of vegetation. Additionally, earth-moving activities and the use of equipment on dry soils could produce emissions of fugitive dust. The air quality impacts of these activities, and applicable mitigation measures are described in the Final EIR for the Carpinteria Salt Marsh Enhancement Plan (SBCFCWCD 2003, SCH 2003021016). Impacts were found to be mitigable to less than significant (Class II).

**3.1.5.7 No Project Alternative**

*Impacts: All Regions*

Implementation of the No Project Alternative within the Santa Barbara County, SCAB, and Kern County regions would not increase air emissions from current levels. As a result, air quality impacts from the No Project Alternative would be less than significant.

MITIGATION MEASURES

None proposed.

**Table 3.1-7. Summary Matrix of Potential Impacts to Air Quality  
Associated with Program Alternatives**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Potential Impact</i>	<i>Impact Class</i>	<i>Mitigation Measures</i>
PA1	AQ-1	Emissions from shell mound and caisson removal and transport activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	<ul style="list-style-type: none"> <li>• <i>MM AQ-1a. Use reformulated (emulsified) diesel fuel in project equipment.</i></li> <li>• <i>MM AQ-1b. Implement 2 to 4 degree injection timing retard (ITR) on all diesel-powered project equipment.</i></li> <li>• <i>MM AQ-1c. Acquire emission reductions through the SBCAPCD Offsite Mitigation Program to offset project daily NOx emissions to less than the SBCAPCD daily threshold of 240 pounds.</i></li> </ul>
		Emissions from transport and disposal activities for each Program Alternative option would exceed the SCAQMD daily and calendar quarter NOx threshold. Also, emissions from transport and disposal activities for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds.	II	<ul style="list-style-type: none"> <li>• <i>MM AQ-1a and MM AQ-1b;</i></li> <li>• <i>MM AQ-1d. Acquire emission reductions through the SCAQMD Offsite Mitigation Program to offset project ROC, CO, and NOx emissions to less than the SCAQMD thresholds.</i></li> </ul>
PA2	AQ-2	Emissions from shell mound spreading and caisson removal and transport activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	<ul style="list-style-type: none"> <li>• <i>MM AQ-1a, MM AQ-1b, and MM AQ-1c</i></li> </ul>
		Emissions from caisson material transport and disposal activities would exceed the SCAQMD daily NOx threshold of 100 pounds.	II	<ul style="list-style-type: none"> <li>• <i>MM AQ-1a, MM AQ-1b, and MM AQ-1d</i></li> </ul>
PA3	AQ-3	Emissions from material transport and placement activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	<ul style="list-style-type: none"> <li>• <i>MM AQ-1a, MM AQ-1b, and MM AQ-1c</i></li> </ul>

**Table 3.1-7. Summary Matrix of Potential Impacts to Air Quality  
Associated with Program Alternatives (continued)**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Potential Impact</i>	<i>Impact Class</i>	<i>Mitigation Measures</i>
PA4	AQ-4	Emissions from rock transport and placement activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1c
		Emissions from rock transport activities would exceed the SCAQMD daily NOx threshold of 100 pounds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1d
PA5	AQ-5a	Emissions from shell mound removal/transport and rock transport/placement activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1c
		Emissions from transport and disposal activities for each Program Alternative option would exceed the SCAQMD daily and calendar quarter NOx threshold. Also, emissions from transport and disposal activities for the Kern County and SCAB disposal options would exceed the SCAQMD daily ROC and CO thresholds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1d
	AQ-5b	Emissions from shell mound spreading and rock transport/placement activities would exceed the SBCAPCD daily NOx threshold of 240 pounds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1c
		Emissions from rock transport activities would exceed the SCAQMD daily NOx threshold of 100 pounds.	II	• MM AQ-1a, MM AQ-1b, and MM AQ-1d

**Table 3.1-7. Summary Matrix of Potential Impacts to Air Quality  
Associated with Program Alternatives (continued)**

<i>Program Alternative</i>	<i>Impact #</i>	<i>Potential Impact</i>	<i>Impact Class</i>	<i>Mitigation Measures</i>
PA6	AQ-6	Significant air quality impacts associated with offsite mitigation actions could occur from (1) combustive emissions due to the use of fossil fuel-fired equipment used in activities such as dredging, earth-moving, or clearing of vegetation or (2) fugitive dust due to the use of equipment on dry soils.	II	<i>See mitigations in the Final EIR for the Carpinteria Salt Marsh Enhancement Plan (SBCFCWCD 2003).</i>